

II. DRAWING AMENDMENTS

Pleas replace the original sheets of drawing showing Figs. 1 and 2 with the enclosed replacement sheets of drawing presenting a corrected Fig. 1 and a corrected Fig. 2, this correction meeting the requirements of the examiner in Point 1 of the Office Action.

V. REMARKS

In the Office Action, correction of the drawing was required to show certain elements appearing in the claims as set forth in Point 1 of the Action. Gimbals have been inserted into Fig. 1, and operator controls and power supplies have been inserted into Fig. 2 to conform the drawing figures to the claims. The corrected sheets of drawing are presented herewith as replacement sheets to meet the requirement for correction of the drawing. An amendment is made also to the specification for conformance to the amended drawing.

Also, claims 1-3 and 6-10 were rejected under 35 U.S.C. 103 as being unpatentable over Koonen (US 6674966) in view of Ames (US 5371814) for reasons set forth in the Action. Other ones of the claims were also rejected under 35 U.S.C. 103 as being unpatentable over various combinations of the cited art, namely, claims 4 and 11 over Koonen in view of Cheong (US 6477154), claims 12 and 13 over Koonen in view of Owens (US patent Publication 2004/0264446), claim 14 over Koonen in view of Owens and Ames, claims 17 and 20 over Koonen in view of Ames and Cheong, and claims 18-19 over Koonen in view of Ames, Cheong, and Ballance (US 4977593) for reasons set forth in the Action.

Various ones of the claims have been amended to distinguish the present invention from the teachings of the cited art, thereby to secure allowable subject matter in the claims. The claims are believed to be allowable in view of the following argument.

An important aspect of the invention is explained in the Background of the Invention and the Summary of the Invention on

pages 1-3 of the present specification. In the paragraph linking pages 1 and 2, it is taught that various radio frequency (RF) components are susceptible to temperature and moisture. This type of equipment is referred to in the specification as sensitive equipment. The specification teaches that it has been the practice in the prior art to locate such equipment at the antenna. This may require an air-conditioned enclosure (page 1 at lines 16-17; page 2 at lines 2-5). To avoid the foregoing disadvantage of the prior art, and to facilitate the construction and operation of such as antenna, the present invention locates the radio frequency equipment in a shelter rather than at the antenna (specification, page 5 at lines 6-8).

In the construction and the operation of the antenna, it is the practice of the invention that various components of the antenna assembly, such as amplifiers, transmitters and receivers, can still be located adjacent an antenna feed (specification, page 8 at lines 14-25) wherein, as is well known, the close positioning between these elements and the feed facilitates the obtaining of desired signal characteristics.

Thus, it is apparent that the determination of what elements need to remain in the antenna assembly, and the recognition that other sensitive (temperature and moisture sensitivity) equipment is to be displaced by a fiber optic cable into a shelter distant from the antenna assembly, provide for an improved antenna system in accordance with the present invention.

In accordance with the examiner's reading of the claims, the examiner has observed that a teaching in Koonen (bottom paragraph of page 3 of the Office Action) of the use of

components that are sensitive to RF signals is the same as certain inventive features set forth in the claims. Such a reading of the claims on the teachings of the cited art is contrary to the above-noted explanation of the present invention, and may be regarded as a misrepresentation of the present invention. Combining the teachings of Koonen with other ones of the cited art simply maintains the confusion as to what constitutes the present invention.

In order to avoid such confusion, and to clarify the description of the invention provided in the present claims, various ones of the claims are amended to set forth the principles of the present invention as presented in the foregoing description of the features of the invention.

By way of example in considering the amendatory passages, the recital of a shelter housing sensitive radio frequency equipment (claim 1 and other ones of the independent claims) is changed to state a shelter housing radio frequency equipment that is sensitive to temperature. Also, in the description of the antenna assembly located apart from the shelter (claim 1 and other ones of the independent claims), there is inserted the descriptive passage that the antenna assembly includes an amplifier assembly coupled to a feed of an antenna of the antenna assembly, and transmission and/or reception components. Additional amendments of clarification and for conformance of language among the claims has also been provided.

Such amendment emphasizes the inventive feature of separating out from the electronic equipment of the antenna assembly those components that are sensitive to temperature (and might also be sensitive to moisture) so that these sensitive components might

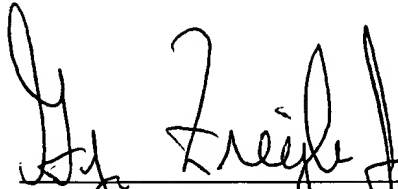
be placed in a shelter rather than requiring the difficult engineering task of introducing air-conditioning into an antenna assembly. Also, as pointed out by claim 1 and other ones of the independent claims, the invention accomplishes this feature by the advantageous use of a bidirectional fiber optic link.

In view of the amendments presented in this response, it is urged that the primary reference, Koonen, in conjunction with the teachings of the other cited references, does not teach a major feature of the present invention, namely a separation of temperature sensitive components from other antenna-assembly components that remain in the antenna assembly, and a placement of the temperature sensitive components in a shelter located apart from the antenna assembly.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested. Should any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

A check in the amount of \$120.00 is enclosed for a one-month extension of time. The Commissioner is hereby authorized to charge payment for any fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,


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29 September 2005
Date

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I hereby certify that this correspondence is being deposited with the United States Postal Service on the date indicated below as first class mail in an envelope addressed to the Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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